UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment and argument field on *9/12/2008*.

2.   ***Claims 1-21*** remain rejected under 35 U.S.C 102(a) as being unpatentable by over Junichi Hayashi (US PG-pub No. 2004/0003261 A1) and in view of background of the invention and in view of Yuan et al. (US PG-pub No. 2002/0161721 A1).

Responses to the Argument

3.   The applicant's arguments filed on *9/12/2008* have been fully considered but they are not persuasive. In the Remarks, the applicant has argued in substance:

Argument (claim 1)

(a) *Hayashi does not disclose an electronic transcript.*

Response:

(a) Hayashi discloses in [0031] "First, a Hash value of image data to be an object (object image data) is calculated and the Hash value is encrypted with a secret key, whereby a digital signature for the object image data is generated", where image data is the electronic transcript.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Junichi Hayashi (US PG-pub No. 2004/0003261 A1), hereinafter Hayashi and in view of background of the invention and in view of Yuan et al. (US PG-pub No. 2002/0161721 A1, hereinafter Yuan.

As per **claim 1**,   Hayashi discloses:

- **obtaining an electronic transcript** (Hayashi, paragraph no. [0095], "FIG. 17 shows a flowchart of the signature processing performed by the signature device described above. First, the image input unit 11 inputs image data of an object of signature image data of an object of compression coding) and sends the image data to the image coding unit 14 and the normalization processing unit 12"), where "unit 14 receive the image " and "image" data ' is the same as transcripts, as claimed;

- **obtaining signature location information including at least one of a page number and a line number within the transcript where a signature image is to appear** (Hayashi, paragraph no. [0157], "Signature object image data is inputted to the signature device 131 and is subjected to signature processing using a first key, and signature data is outputted. Note that any signature device of the above-described embodiments may be used as the signature device in this embodiment. For example, in the case in which the signature device in accordance with the second embodiment is applied, data which should be inputted is a code stream. In addition, the normalization processing is also performed in the signature device in this embodiment as in the above-described embodiments");

- **incorporating said signature image into the electronic transcript; associating said signature image with said signature location information** (Hayashi, paragraph no. [0161], "Since an unspecified large number of users is accessible to the network 133, the image data inputted to the signature device 131 is likely to be falsified until the image ...a normalization method used at the time of signature is necessary, and the normalization method can also be used as a third key for performing the verification processing");

- **performing a modification detection operation on the electronic transcript to generate a representation of the contents of the electronic transcript** (Hayashi, paragraph no. [0038], "an input step of inputting compression-coded data, which is obtained by coding coding object data in the coding device, and normalization information, which indicates a reference for converting the compression-coded data into the normalized state"), where "normalization data" is the modification and "indicates a reference for converting" is the detection, as claimed.

But Hayashi does not explicitly teach "**providing for the recording and time stamping by a digital notary service of the representation of the contents of the electronic transcript or obtaining a notary record from the digital notary service of the time stamping** or

digitally signing the notary record or forming an electronically signed electronic transcript by bundling the digitally signed notary record with the electronic transcript".

However, in the relevant art at the time of invention Yuan discloses (Yuan, paragraph no. [0037], "In this particular example, service provider 130 provides digital notary service to generate and subsequently verify records of transactions. The service provider 130's records are stored in database 140, which typically is maintained with high security and reliability in order to enhance the trustworthiness of the records in the database 140 and of the services provided by service provider 130"), where image data used for digital signature as a "Digital Notary Service" as claimed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Hayashi with Yuan's disclosure of "Digital Notary Service to generate and subsequently verify records of transactions".

The modification would be obvious because one of the ordinary skills in the art would want to notarize legal document electronically in a distributed environment to obtain/view/print the document anywhere from the world with out a visit to Attorney office, which is also serve as serve as time and cost saving purposes.

As per *claim 2*, claim 1 incorporated and Hayashi discloses:

- **performing a first hash operation on the electronic transcript to generate a representation of the contents of the electronic transcript** (Hayashi, paragraph [0109], "Signature data and the public key Kp are inputted to the decryption processing unit 53. The decryption processing unit 53 applies encryption and decryption processing to the signature data using the public key Kp to calculate a Hash value (first Hash value)");

- **concatenating data to the representation of the contents of the electronic transcript, said data identifying a user** (Hayashi, paragraph no. [0037], "a holding step of holding verification data which is obtained based upon compression-coded data in a normalized state generated in the coding device");

- **and performing a second hash operation on the data concatenated to the representation, the second hash operation generating a representation of the contents of the electronic transcript and the data** (Hayashi, Abstract, " calculates a Hash value of the

normalized code stream (second Hash value). Next, the verification processing unit compares the first Hash value and the second Hash value and, if the first Hash value and the second Hash value are equal, judges that the code stream is not falsified").

As per *claim 3*, claim 2 incorporated and Hayashi does not explicitly teach a particular "RIPEMD-160" hash function, however, the background of the instant application discloses (paragraph no. 0015], " As the Hash function, there are known, for example, MD-2, MD-4, MD-5, SHA-1, RIPEMD-128, or RIPEMD-160 . These algorisms have been laid open to the public.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Hayashi with background's disclosure of "**RIPEMD-160**" hash algorithm.

The modification would be obvious because one of the ordinary skills in the art would want to use an efficient algorithm which is known and open to the public.

As per *claim 4-5*, claim 3 incorporated and Hayashi does not explicitly teach "**user name uniquely identifying the user**", however, the background of the instant application discloses (paragraph no. 0025], "That is, only a user himself/herself having the secret key Ks can calculate D (Ks, M') and, even if another user uses a false secret key Ks' to calculate D (Ks', M) and pretends to be the user himself/herself having the secret key Ks, since E (Kp, D (Ks', M')).noteq.M', the reception side can confirm that the received data is illegal"), where using secret key to identify the user mechanism used, as claimed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Hayashi with background's disclosure of "using secret key".

The modification would be obvious because one of the ordinary skills in the art would want to have data security mechanism in place to prevent intrusion.

As per *claim 6*, claim 1 incorporated and Hayashi discloses:

- wherein said signature image is obtained by scanning a signature into an image file (Hayashi, paragraph no. [0086], "First, pixel signals forming an image to be an object of signature processing are inputted to the image input unit 11 in the order of raster scan").

As per *claim 7*, claim 1 incorporated and Hayashi discloses:

-incorporating said signature image into said electronic transcript at the location indicated by said signature location information (Hayashi, paragraph no. [0086], "First, pixel signals forming an image to be an object of signature processing are inputted to the image input unit 11 in the order of raster scan. Thereafter, the respective pixel signals are inputted to the normalization processing unit 12 and the image coding unit 14").

As per *claim 8-9*:

Official notice hereby taken that is well-known in the art to use "pointer" in data parsing algorithm and it is a common and efficient practice.

As per *claim 10*, Hayashi discloses:

- receiving a signature document having a signature thereon from a user (Hayashi, paragraph no. [0090], "A normalization method is determined as a class and contents of the class is shared by the signature processing unit 13 and a verification processing unit of a verification device described later in advance, whereby it is sufficient to send an identifier"), where signature verification unit verify the signature, as claimed;

- scanning said signature into a signature image file (Hayashi, paragraph no. [0086], "First, pixel signals forming an image to be an object of signature processing are inputted to the image input unit 11 in the order of raster scan");

- receiving an electronic transcript (Hayashi, paragraph no. [0090], "A normalization method is determined as a class and contents of the class is shared by the signature processing unit 13 and a verification processing unit of a verification device described later in advance, whereby it is sufficient to send an identifier"), where signature verification unit verify the signature, as claimed;

- **receiving signature location information including at least one of a page number and a line number within the electronic transcript where a signature image is to appear when the electronic transcript is displayed on a viewer** (Hayashi, paragraph no. [0141], "An image is restored by the above processing and outputted to the image output unit 1905. The image output unit 1905 may be an image display apparatus such as a monitor or may be a storage device such as a magnetic disk"), "unit 1905" is the display to view data, as claimed.

- **incorporating the electronic transcript, signature image file and signature location information into an electronic transcript file** (Hayashi, paragraph no. [0161], "Since an unspecified large number of users is accessible to the network 133, the image data inputted to the signature device 131 is likely to be falsified until the image …a normalization method used at the time of signature is necessary, and the normalization method can also be used as a third key for performing the verification processing");

- **performing a hash operation on the electronic transcript file to generate a representation of the contents of the electronic transcript file** (Hayashi, Abstract, "when signature data is inputted, a verification processing unit 22 performs encryption and decryption processing with respect to the signature data using a public key Kp and calculates a Hash value (first Hash value) and, … the second Hash value are not equal, the verification processing unit judges that the code stream is falsified").

But Hayashi does not explicitly teach "**providing for the recording and time stamping by a digital notary service of the representation of the contents of the electronic transcript or obtaining a notary record from the digital notary service of the time stamping or digitally signing the notary record or forming an electronically signed electronic transcript by bundling the digitally signed notary record with the electronic transcript**".

However, in the relevant art at the time of invention Yuan discloses (Yuan, paragraph no. [0037], "In this particular example, service provider 130 provides digital notary service to generate and subsequently verify records of transactions. The service provider 130's records are stored in database 140, which typically is maintained with high security and reliability in order to enhance the trustworthiness of the records in the database 140 and of the services provided by service provider 130"), where image data used for digital signature as a "Digital Notary Service" as claimed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Hayashi with Yuan's disclosure of "Digital Notary Service to generate and subsequently verify records of transactions".

The modification would be obvious because one of the ordinary skills in the art would want to notarize legal document electronically in a distributed environment to obtain/view/print the document anywhere from the world with out a visit to Attorney office, which is also serve as serve as time and cost saving purposes.

Claim 11 is rejected under the same reason set forth in connection of claim 3.

As per *claim 12*, claim 10 incorporated and Hayashi discloses:

-wherein said performing a hash operation comprises: performing a first hash operation on said electronic transcript file to generate a representation of the contents of the electronic transcript file; concatenating data to the representation of the contents of the electronic transcript file, said data identifying a user (Hayashi, paragraph [0109], "Signature data and the public key Kp are inputted to the decryption processing unit 53. The decryption processing unit 53 applies encryption and decryption processing to the signature data using the public key Kp to calculate a Hash value (first Hash value)");

- performing a second hash operation on the data and the representation, the second hash operation generating a representation of the contents of the electronic transcript file and the data(Hayashi, Abstract, " calculates a Hash value of the normalized code stream (second Hash value). Next, the verification processing unit compares the first Hash value and the second Hash value and, if the first Hash value and the second Hash value are equal, judges that the code stream is not falsified").

Claim 13 is rejected under the same reason set forth in connection of claim 4.

As per *claim 14*:

Official notice hereby taken that is well-known in the art to use of user data always keep track with associated user.

Claim 15 is rejected under the same reason set forth in connection of claim 5.

As per *claim 16*, claim 10 incorporated and Hayashi discloses:

- when displaying the electronic transcript, is operable display the signature image at the signature image location (Hayashi, paragraph no. [0141], "An image is restored by the above processing and outputted to the image output unit 1905. The image output unit 1905 may be an image display apparatus such as a monitor or may be a storage device such as a magnetic disk"), "unit 1905" is the display to view data, as claimed.

As per *claim 17*, Hayashi discloses:

- a computer useable medium and computer readable code embodied on said computer useable medium for causing electronically signing an electronic transcript by a user, the computer readable code comprising: computer readable program code devices configured to cause the computer to effect the receiving of an electronic transcript (Hayashi, paragraph no. [0099], "FIG. 2 is a block diagram showing a functional structure of the verification device. As shown in the figure, the verification device includes a normalization processing unit 21 and a verification processing unit 22. Note that functions of the units shown in this figure may be realized by a software program. That is, this is because, by causing a computer to read a program having the functions of the respective units, this computer becomes capable of realizing the functions of the respective units").

But Hayashi does not explicitly teach **"digital notary service"**. However, in the relevant art at the time of invention Yuan discloses (Yuan, paragraph no. [0037], "In this particular example, service provider 130 provides digital notary service to generate and subsequently verify records of transactions. The service provider 130's records are stored in database 140, which typically is maintained with high security and reliability in order to enhance the trustworthiness of the records in the database 140 and of the services provided by service provider 130"), where image data used for digital signature as a "Digital Notary Service" as claimed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Hayashi with Yuan's disclosure of "Digital Notary Service to generate and subsequently verify records of transactions".

The modification would be obvious because one of the ordinary skills in the art would want to notarize legal document electronically in a distributed environment to obtain/view/print

the document anywhere from the world with out a visit to Attorney office, which is also serve as serve as time and cost saving purposes.

As per *claim 18*, claim 17 incorporated and Hayashi discloses:

      - computer readable program code devices configured to cause the computer to effect the performing a first hash operation on said electronic transcript file to generate a representation of the contents of the electronic transcript file; computer readable program code devices configured to cause the computer to effect the concatenating data to the representation of the contents of the electronic transcript file, said data identifying the user; and computer readable program code devices configured to cause the computer to effect the performing a second hash operation on the data concatenated to the representation, the second hash operation generating a representation of the contents of the electronic transcript file and the data (Hayashi, Abstract, "A code stream and data indicating a normalization method are inputted to a normalization processing unit 21, and the normalization processing unit applies normalization processing to the code stream to generate a normalized code stream. Next, when signature data is inputted, a verification processing unit 22 performs encryption and decryption processing with respect to the signature ... the verification processing unit judges that the code stream is falsified").

As per *claim 19*, Hayashi discloses:

      - An electronically signed electronic transcript comprising an electronic transcript file, and a digitally signed notary record, said signed electronic transcript obtained by: receiving an electronic transcript (Hayashi, paragraph no. [0095], "FIG. 17 shows a flowchart of the signature processing performed by the signature device described above. First, the image input unit 11 inputs image data of an object of signature image data of an object of compression coding) and sends the image data to the image coding unit 14 and the normalization processing unit 12"), where "unit 14 receive the image " and "image" data ' is the same as transcripts, as claimed;

      - receiving signature location information including at least one of a page number and a line number within the electronic transcript where a signature image is to appear

when the electronic transcript is displayed on a viewer (Hayashi, paragraph no. [0141], "An image is restored by the above processing and outputted to the image output unit 1905. The image output unit 1905 may be an image display apparatus such as a monitor or may be a storage device such as a magnetic disk"), "unit 1905" is the display to view data, as claimed.

- **incorporating the electronic transcript, a signature image file and the signature location information into the electronic transcript file; performing a hash operation on the electronic transcript file to generate a representation of the contents of the electronic transcript file; providing for the recording and time stamping by a digital notary service of the representation of the contents of the electronic transcript file** (Hayashi, paragraph no. [0157], "Signature object image data is inputted to the signature device 131 and is subjected to signature processing using a first key, and signature data is outputted. Note that any signature device of the above-described embodiments may be used as the signature device in this embodiment. For example, in the case in which the signature device in accordance with the second embodiment is applied, data which should be inputted is a code stream. In addition, the normalization processing is also performed in the signature device in this embodiment as in the above-described embodiments");

But Hayashi does not explicitly teach "**digital notary service of the times tamping**" However, in the relevant art at the time of invention Yuan discloses (Yuan, paragraph no. [0037], "In this particular example, service provider 130 provides digital notary service to generate and subsequently verify records of transactions. The service provider 130's records are stored in database 140, which typically is maintained with high security and reliability in order to enhance the trustworthiness of the records in the database 140 and of the services provided by service provider 130"), where image data used for digital signature as a "Digital Notary Service" as claimed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the teaching of Hayashi with Yuan's disclosure of "Digital Notary Service to generate and subsequently verify records of transactions".

The modification would be obvious because one of the ordinary skills in the art would want to notarize legal document electronically in a distributed environment to obtain/view/print

the document anywhere from the world with out a visit to Attorney office, which is also serve as serve as time and cost saving purposes.

As per *claim 20*, claim 19 is incorporated and Hayashi discloses:

- **wherein said step of performing a hash operation comprises: performing a first hash operation on said electronic transcript file to generate a representation of the contents of the electronic transcript file; concatenating data to the representation of the contents of the electronic transcript file, said data identifying a user; and performing a second hash operation on the data and the representation, the second hash operation generating a representation of the contents of the electronic transcript file and the data** (Hayashi, Abstract, "A code stream and data indicating a normalization method are inputted to a normalization processing unit 21, and the normalization processing unit applies normalization processing to the code stream to generate a normalized code stream. Next, when signature data is inputted …On the other hand, if the first Hash value and the second Hash value are not equal, the verification processing unit judges that the code stream is falsified").

As per *claim 21,* claim 1 incorporated and Hayashi discloses:

-**wherein said signature image is obtained by scanning a notarize copy of a signature** (Hayashi, paragraph no. [0086], "First, pixel signals forming an image to be an object of signature processing are inputted to the image input unit 11 in the order of raster scan").

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (See form "PTO-892 Notice of reference cited).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONJOUR RAHIM whose telephone number is (571)270-3890. The examiner can normally be reached on 5:30 AM - 3:30 PM (Mo - Th).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz, Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monjour Rahim/
Patent Examiner
Art Unit: 2434
Date: 12/01/2008

/Kambiz Zand/

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